

COMMONWEALTH OF VIRGINIA
Department of Environmental Quality
Piedmont Regional Office

STATEMENT OF LEGAL AND FACTUAL BASIS

Permittee Name:	Quebecor World San Jose Inc.
Facility Name:	Quebecor World Richmond, Inc. 7400 Impala Drive Richmond, VA. 23228 Henrico County
Permit No.	PRO-50880

Title V of the 1990 Clean Air Act Amendments required each state to develop a permit program to ensure that certain facilities have federal Air Pollution Operating Permits, called Title V Operating Permits. As required by 40 CFR Part 70 and 9 VAC 5 Chapter 80, Quebecor World San Jose, Inc. has applied for a Title V Operating Permit for its Henrico County facility. The Department has reviewed the application and has prepared a draft Title V Operating Permit.

Engineer/Permit Contact:_____ Date:_____

Air Permit Manager:_____ Date:_____

Regional Permit Manager:_____ Date:_____

FACILITY INFORMATION

Permittee

Quebecor World San Jose Inc.
dba: Quebecor World Richmond Inc.
P.O. Box 9579
Richmond, Virginia 23228

Facility

Quebecor World Richmond Inc.
7400 Impala Drive
Richmond, Virginia 23228

County Plant ID No.: 087-0130

SOURCE DESCRIPTION: SIC Code: 2754 - This facility (Quebecor World Richmond, Inc, owned and operated by Quebecor World San Jose, Inc.) is a publication printing facility which uses rotogravure printing processes to print newspaper inserts, advertising circulars and supplements, retail and wholesale catalogs, tabloid magazines and other commercial publication printing. There are five types of emission sources at the facility: emissions from printing processes (from operation of the seven rotogravure presses); emissions from press cleaning operations (including floor cleaning and press parts and cylinder cleaning); emissions from the three combustion boilers which produce process heat; emission from press cylinder manufacturing; and emissions from waste paper handling.

Printing Processes: The publication printing is currently performed on six production rotogravure presses with multiple color stations each. Four of the production presses have an additional flexographic imprinter which adds type messages to the print web. One non-production press with only four color stations provides a cylinder proofing capability to the cylinder manufacturing process. Five of the presses have in-line collating, folding and trimming lines resulting in a press-finished product ready for shipping to the customer. The rotogravure inks consist of 45% to 65% Volatile Organic Compounds (VOC), some of which are also hazardous air pollutants (HAPS) by weight, as applied at the presses. VOC emissions from six of the seven presses are fugitive emissions, due mostly to evaporative losses from the printed web outside of the influence of VOC vapor collection devices, and process emissions due to drying the imprinted web within the influence of VOC vapor collection devices. One press is totally enclosed for the purpose of VOC vapor collection; 100% of the VOC those emissions are captured. Fugitive emissions from other presses are controlled to a large degree because the pressrooms meet most of the EPA criteria for total enclosures. The six production presses are subject to the requirements of 40 CFR 60, Subparts A and QQ (Standards of Performance for the Graphic Arts Industry: Publication Rotogravure).

VOC emissions from the seven presses are collected and the solvent laden air is sent to the three solvent recovery systems. The VOC in the solvent laden air is adsorbed onto carbon beds. When a bed becomes saturated with VOC and solvent laden air begins to break through the bed, the bed is isolated and thermally desorbed with steam, and the solvent laden steam is condensed and the solvent solvent of decanted and separated from the resultant water stream.

The seven presses, all storage tanks, ink mixing tanks, the parts cleaning processes, the Renzmann cylinder wash tank and the cylinder correction tanks are subject to the requirements of 40 CFR 63, Subparts A and KK (National Emission Standards for the Printing and Publishing Industry).

Fuel Burning Equipment Processes: The three process heat boilers supply steam heat to the print station dryers to the solvent recovery system. The boilers have the capability to burn either natural gas or distillate fuel oil. The newest (Johnson) boiler is subject to the requirements of 40 CFR 60, Subparts A and Dc (Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units). The other two boilers are not currently subject to any federal requirements. Two small fuel oil storage tanks store fuel oil for the boilers.

The Printing Cylinder Manufacturing facility consists of a chemical dechrome tank, a mechanical dechrome tank, a non-VOC degreasing tank, a electrolytic copper plating tank, a helio-klischograph (an electro-mechanical engraver), an hard chrome electroplating tank, and a finishmaster, and a handing polisher. Each rotogravure printing cylinder consists of a steel rotary core covered by a copper engraving surface. The surface of the copper cylinder is hardened by thin chrome plating.

The used cylinders are cleaned in the Renzmann cylinder wash tank and then the outer chrome layer is removed in the chemical dechrome tank (or mechanically stripped). The old engraved copper surface is removed in the polishing tank and the cutting oil is removed in the non-VOC degreasing tank. Then the copper cylinder surface is rebuilt in the copper electroplating tank and machined true with the polishing tank. A new printing image is engraved onto the new copper surface with the helio-klipschograph, and a complete set of cylinders is sent to the proof press to determine if the printing surfaces need correction. The engraved cylinder is then corrected by enlarging or reducing the size of the engraved ink-holding cells in the copper printing surface in the cylinder correction tanks. Finally, a new chrome plate is electrolytically deposited on the engraved copper surface to prevent excessive wear during printing, and the freshly chrome-plated cylinders are polished to achieve the desired final printing surface. The electrolytic chrome plating tanks are subject to the requirements of 40 CFR 63, subparts A and N (National Emission Standards for Chromium Emissions from Hard and Decorative Chromium Electroplating Tanks).

Waste Paper Handling Processes: The waste paper handling system collects, shreds and bales waste paper from the printing processes and the product press finishing lines. Air from the paper collection cyclones is routed through fabric filter baghouses to remove the fine particulates from the air before the air is returned to atmosphere.

Facility Title V Applicability

The Quebecor facility is a Title 5 major source of VOC and Hazardous Air Pollutants (HAPs). The Quebecor World San Jose Inc. (dba Quebecor World Richmond) - Richmond facility is located in Henrico County, which is an attainment area for all criteria pollutants. The five earlier production presses and the proof press as well as the two earlier boilers were permitted under the state minor New Source Review (NSR) program. However, the most recent press (P006) and the Johnson boiler (B003) were permitted as a major modification in an ozone nonattainment area before the area was redesignated as "attainment" in 1997. LAER controls were required and offsets purchased as a part of the Nonattainment NSR process for that press and boiler. The nonattainment permit was dated December 15, 1994. That permit has been modified several times to add new parts washer and various other equipment under the state's minor NSR program. The most recent effective permit dated September 12, 2003 is attached.

COMPLIANCE STATUS

The last Full Compliance Evaluation of the facility was on May 9, 2002. This inspection was in conjunction with an EPA audit. In attendance was Ms. Lisa Earhart, compliance enforcement inspector and Mr. Sparky Lisle, compliance manager. Several compliance issues were noted during the inspection. The facility and DEQ entered into a Consent Order to resolve the noncompliance issues. On May 13, 2003, a letter was sent to the facility stating the case was resolved.

EMISSION UNIT AND CONTROL DEVICE IDENTIFICATION

The emissions units at this facility consist of the following:

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
Fuel Burning Equipment							
B001	S011	Cleaver Brooks Boiler, 1979 firing natural gas and distillate oil	29.4 MMBtu/hr				9/12/03
B002	S012	Cleaver Brooks Boiler, 1985 firing natural gas and distillate oil	33.48 MMBtu/hr				9/12/03
B003	S013	Johnson Boiler, 1995 firing natural gas and distillate oil	33.48 MMBtu/hr				9/12/03
Rotogravure Presses P001-P007							
P001	S001 S002	Rotogravure Press 740 75 inch width, 1700 fpm 8 stations Goss press, 1981	861.4 lbs VOC/hr as applied	Sutcliffe & Croftshaw Carbon Adsorption Systems - Overall Control Efficiency of 91%	C001 C002	VOC HAP	9/12/03
P002	S001 S002	Rotogravure Press 741 75 inch width, 1700 fpm 8 stations Goss press, 1980	915.9 lbs VOC/hr as applied	Sutcliffe & Croftshaw Carbon Adsorption Systems - Overall Control Efficiency of 91%	C001 C002	VOC HAP	9/12/03
P003	S001 S002	Rotogravure Press 742 96 inch width, 2000 fpm 10 stations Mottter press, 1980	1039.6 lbs VOC/hr as applied	Sutcliffe & Croftshaw Carbon Adsorption Systems - Overall Control Efficiency of 91%	C001 C002	VOC HAP	9/12/03
P004	S001 S002	Rotogravure Press 743 75 inch width, 1700 fpm 8 stations	915.9 lbs VOC/hr as applied	Sutcliffe & Croftshaw Carbon Adsorption Systems - Overall	C001 C002	VOC HAP	9/12/03

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
		Goss press, 1985		Control Efficiency of 91%			
P005	S001 S002	Rotogravure Press 744 94 inch width, 3000 fpm 8 stations Albert Frankenthal press, 1988	1406.0 lbs VOC/hr as applied	Sutcliffe & Croftshaw Carbon Adsorption Systems - Overall Control Efficiency of 91%	C001 C002	VOC HAP	9/12/03
P006	S003	Rotogravure Press 745 125 inch width, 3000 fpm 8 station Albert Frankenthal press, 1995	1952.0 lbs VOC/hr as applied	Dedert Carbon Adsorption System & Total Enclosure - Overall Control Efficiency of 97.7%	C003	VOC HAP	9/12/03
P007	S001 S002	Rotogravure Proof Press 94 inch width, 250 fpm 8 stations Motter press, 1980	11.4 lbs VOC/hr as applied	Sutcliffe & Croftshaw Carbon Adsorption Systems - Overall Control Efficiency of 91%	C001 C002	VOC HAP	9/12/03
Cylinder Cleaning Tank							
P008	S001 S002	Cylinder Wash Tank Renzmann, 1986	6 cylinders/hr	Sutcliffe & Croftshaw Carbon Adsorption Systems - Overall Control Efficiency of 91%	C001 C002	VOC HAP	9/12/03
P009	Fugitive	Cylinder corrections tank wipe cleaning, 80-125 inch cylinders	NA				
P010	Fugitive	Cylinder corrections tank wipe cleaning, 80-99 inch cylinders	NA				
P011	Fugitive	Cylinder corrections tank wipe cleaning, 80-99 inch cylinders	NA				
P012	Fugitive	Cylinder corrections tank wipe cleaning, 80-99 inch cylinders	NA				

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
P013	Fugitive	Cylinder corrections tank wipe cleaning, 80-99 inch cylinders	NA				
Cylinder Manufacturing Process							
P015	S008	Chromium (hard) Electroplating Tank 12,000 amps Walter, 1995	(3) - 94 inch cylinders/hr	MAPCO Demister Filter (composite mesh pad) & Total Enclosure - Overall Control Efficiency 99%	C004	Chromium	
Waste Paper Handling System							
P017	S009	Paper Waste handling System 1 Hogger, Baler, Cyclone	8,000acfm	Steelcraft Fabric Filter rated at 8,000 acfm with a Control Efficiency of 90%	C005	PM PM ₁₀	9/12/03
P018	S010	Paper Waste handling System 2 Hogger, Baler, Cyclone	12,000 acfm	Steelcraft Fabric Filter rated at 12,000 acfm with a Control Efficiency of 90%	C006	PM PM ₁₀	9/12/03
P019	S011	Paper Waste handling System 3 Hogger, Baler, Cyclone	18,000 acfm	Steelcraft Fabric Filter rated at 18,000 acfm with a Control Efficiency of 90%	C007	PM PM ₁₀	9/12/03
Adhesive Process							
P020	Fugitive	Manual Paster Glue Process	NA				9/12/03
VOC Storage Tanks							
T001	Fugitive	VOC Storage Tank Ink, 1979	5000 gallon				
T002	Fugitive	VOC Storage Tank Ink, 1979	5000 gallon				
T003	Fugitive	VOC Storage Tank Ink, 1979	5000 gallon				
T004	Fugitive	VOC Storage Tank	5000 gallon				

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
		Ink, 1979					
T005	Fugitive	VOC Storage Tank Extender, 1979	5000 gallon				
T006	Fugitive	VOC Storage Tank Extender, 1979	5000 gallon				
T007	Fugitive	VOC Storage Tank Ink, 1979	5000 gallon				
T008	Fugitive	VOC Storage Tank Ink, 1979	5000 gallon				
T009	Fugitive	VOC Storage Tank Ink, 1979	5000 gallon				
T0010	Fugitive	VOC Storage Tank Ink, 1979	5000 gallon				
T0011	Fugitive	VOC Storage Tank Ink, 1988	5000 gallon				
T0012	Fugitive	VOC Storage Tank Ink, 1991	5000 gallon				
T0013	Fugitive	VOC Storage Tank Ink, 1991	5000 gallon				
T0014	Fugitive	VOC Storage Tank Ink, 1995	5000 gallon				
T0015	Fugitive	VOC Storage Tank Naptha, 1988	6000 gallon				
T0016	Fugitive	VOC Storage Tank Xylene, 1995	6000 gallon				
T017	Fugitive	VOC Storage Tank Reclaimed VOC Adamson, 1986	6000 gallon				
T018	Fugitive	VOC Storage Tank	6000 gallon				

Emission Unit ID	Stack ID	Emission Unit Description	Size/Rated Capacity*	Pollution Control Device (PCD) Description	PCD ID	Pollutant Controlled	Applicable Permit Date
		Reclaimed VOC Adamson, 1986					
T019	Fugitive	VOC Storage Tank Reclaimed VOC Adamson, 1986	6000 gallon				
T020	Fugitive	VOC Storage Tank Reclaimed VOC, 1988	6000 gallon				
T021	Fugitive	VOC Storage Tank Reclaimed VOC Highland, 1995	6000 gallon				

*The Size/Rated capacity and PCD efficiency is provided for informational purposes only, and is not an applicable requirement.

* Emissions from Units P001, P002, P003, P004, P005, P007, and P008 may be controlled by one of two Sutcliffe & Croftshaw Carbon Adsorption Systems (C001or C002) and emitted from the connecting stack (S001 or S002)

EMISSIONS INVENTORY

A copy of the 2002 annual emission update is attached. Emissions are summarized in the following tables.

2002 Actual Emissions

Emission Unit	2002 Criteria Pollutant Emission in Tons/Year				
	VOC	CO	SO ₂	PM ₁₀	NO _x
Boilers 001,002,003	0.8	12.2	0.1	1.1	14.5
Press 740	103.6	-	-	-	-
Press 741	141.4	-	-	-	-
Press 742	136.8	-	-	-	-
Press 743	105.4	-	-	-	-
Press 744	166.6	-	-	-	-
Proof Press	0.1	-	-	-	-
Renzmann Cylinder Wash	0.044	-	-	-	-
Press745	40.2	-	-	-	-
Paster Glue	0.1	-	-	-	-
Waste Paper Handling	0	-	-	-	-
Total	695.044	12.2	0.1	1.1	14.5

2002 Facility Hazardous Air Pollutant Emissions

Pollutant	2002 Hazardous Air Pollutant Emission in Tons/Yr
Benzene	0.07
Eythlbenzene	14.4
Hexane	7.2
Toluene	666.6
Xylenes	27.8

FUEL BURNING EQUIPMENT APPLICABLE REQUIREMENTS - [B001, B002, B003]

Limitations

Applicable Requirements from the NSR Permit: The following limitations are applicable requirements from the NSR permit issued on September 12, 2003. A copy of the permit is attached as attachment B.

Condition 18: Operating and Training Procedures - Boiler emissions shall be controlled by proper operation and maintenance of combustion equipment. Boiler operators shall be trained in the proper operation of all such equipment. Training shall consist of a review and familiarization of the manufacturer's operating instructions, at minimum. The permittee shall maintain records of the required training including a statement of time, place and nature of training provided. The permittee shall have available good written operating procedures and a maintenance schedule for the boiler. These procedures shall be based on the manufacturer's recommendations, at minimum. All records required by this condition shall be kept on site and made available for inspection by the DEQ.

(9 VAC 5-170-160)

Included as Condition III. A.7.

Condition 14: Fuel - The approved fuels for the boilers are natural gas and distillate oil. Distillate oil is defined as fuel oil that meets the specifications for fuel oil numbers 1 and 2 under the American Society for Testing and Materials, ASTM D396-97 "Standard Specification for Fuel Oils". A change in the fuels may require a permit to modify and operate.

(9 VAC 5-80-1180)

Included as Condition III.A.1.

Condition 15: Fuel Throughput - The boilers shall consume no more than a total of 409.3 million cubic feet of natural gas and a total of 680,000 gallons of distillate oil per year, calculated monthly as the sum of the gas or oil consumption over the previous consecutive 12 months.

(9 VAC 5-80-1180)

Included as Condition III.A.4.

Condition 16: Fuel Sulfur Limit: Fuel - The distillate oil and natural gas shall meet the specifications below:

DISTILLATE OIL which meets the ASTM [D396] specification for numbers 1 or 2 fuel oil:	
Maximum sulfur content per shipment:	0.5%

NATURAL GAS:	
Minimum heat content:	1000 Btu/cf HHV.

(9 VAC 5-80-1180)

Included as Condition III.A.2.

Condition 17: Fuel Certification - The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following: a. The name of the fuel supplier, b. The date on which the oil was received, c. The volume of distillate oil delivered in the shipment, d. A statement that the distillate

oil complies with the American Society for Testing and Materials specifications for fuel oil numbers 1 and 2, and e. The sulfur content of the oil.

(9 VAC 5-80-1180 and 40 CFR)

Included as Condition III.A.3.

Condition 22: Emission Limits - Emissions from the operation of all three natural gas/distillate oil-fired boilers shall not exceed the limits specified below:

	Boiler Specific Hourly Emissions			Combined Hourly and Annual Emissions from B-1, B-2, and B-3	
	B-1	B-2	B-3	Hourly	Annual
TSP	0.9 lbs/hr	0.5 lbs/hr	0.5 lbs/hr	1.8 lbs/hr	2.2 tpy
PM ₁₀	0.4 lbs/hr	0.3 lbs/hr	0.3 lbs/hr	0.9 lbs/hr	1.9 tpy
SO ₂	30.3 lbs/hr	17.2 lbs/hr	17.2 lbs/hr	64.7 lbs/hr	24.3 tpy
NO _x	8.5 lbs/hr	4.9 lbs/hr	4.9 lbs/hr	18.2 lbs/hr	27.3 tpy
CO	2.5 lbs/hr	2.8 lbs/hr	2.8 lbs/hr	8.1 lbs/hr	18.9 tpy
VOC	0.2 lbs/hr	0.2 lbs/hr	0.2 lbs/hr	0.5 lbs/hr	1.2 tpy

(9 VAC 5-50-260)

Included as Condition III.A.5.

Condition 27: Visible Emissions Limits - Visible emissions from each of the boiler stacks shall not exceed 10 percent opacity except during one six-minute period in any one hour in which visible emissions shall not exceed 20 percent opacity. This condition applies at all times except during start-up, shutdown, or malfunction.

(9 VAC 5-50-80 and 9 VAC 5-50-20)

Included as Condition III.A.6.

Condition 29 NSPS Subpart Dc Requirements by Reference - Except where this permit is more restrictive than the applicable requirement, the NSPS Subpart Dc equipment as described in Condition 2 shall be operated in compliance with the requirements of 40 CFR 60, Subpart Dc.

(9 VAC 5-50-400 and 9 VAC 5-50-410)

This condition is a "Requirements by Reference" condition that states the federal standard applicability to the unit. This general condition has been included in case in the Title V permit in case any specific requirements of the subpart were not included or are changed.

Included as Condition III.A.8

Applicable Requirements from the Virginia Regulations: The following are Virginia Administrative Codes that have specific emission requirements which have been determined to be applicable:

NSPS Subpart Dc: 40 CFR §60.42c(e)(2) and (h)(1) - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. The standard for sulfur dioxide is applicable to Boiler B003. The calculated standard from paragraph (e)(2) is 0.5 lb/mmBtu heat input for this natural gas- and oil-fired boiler. In accordance with (h)(1), compliance may be determined by a fuel certification from the fuel supplier. Also, Condition III.A.1. meets the fuel specifications for this requirement as well as Condition III.A.2. which includes the sulfur limit.

9 VAC 5-50-260 requires BACT to be applied for all new and modified emission units and this requirement applies to the boilers B001 and B002 however this general emission requirement was subsumed in the NSR permit by the fuel specification requirements, the sulfur limit, and the fuel certification in Conditions III.A.1, 2, and 3 of the operating permit.

9 VAC 5-50-270 requires LAER to be applied for all new and modified major source emission units and this requirement applies to the boilers B003, however this general emission requirement was subsumed in the NSR permit by the operation the fuel specification requirements, the sulfur limit, and the fuel certification in Conditions III.A.1, 2, and 3 of the Title V operating permit.

9 VAC 5-50-80 Standard for visible emissions requires that "...no owner or other person shall cause or permit to be discharged into the atmosphere any visible emissions which exhibit greater than 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity." This condition has been streamlined by Condition III.A.6. of the Title V operating permit as it is a more stringent requirement.

Monitoring

Applicable Requirements from the NSR Permit: There are no applicable monitoring requirements for the fuel burning equipment from the NSR permit issued on September 12, 2003.

Short term emission limits: Because hourly emission limits are based upon liberal AP-42 emission factors and the rated hourly heat input heat capacity of the boilers, no monitoring was required to demonstrate periodic compliance with hourly emission limits.

Long term throughput and emission limits: Records required by Condition 41 f. of the NSR permit provide assurance of periodic compliance with annual throughput and emission limits. No further monitoring was required.

Sulfur dioxide monitoring by fuel certification: Records required by Condition 17 and 41 f of the NSR permit provides assurance of periodic compliance with fuel sulfur limits of Condition 16. No further monitoring was required.

Applicable Requirements from the Virginia Regulations: There are no monitoring requirements from the Virginia Administrative Codes that have been determined to be applicable.

Additional Periodic Monitoring Requirements: The following monitoring requirements has been added for periodic monitoring to meet Part 70 requirements:

For each boiler which burns fuel oil for a total of 6 hours or more during any calendar week, the associated boiler stack shall be observed visually for a six minute period at least once during that calendar week while the boiler is burning fuel oil in order to determine if there are any visible emissions from that boiler other than a short, white condensed-water plume. If visible emissions are present at any time during the observation period, a visible emission evaluation (VEE) in accordance with 40 CFR Part 60, Appendix A, Method 9 shall be performed by a certified observer within 48 hours unless corrective adjustment, maintenance or repair has corrected the condition within 12 hours of the observation. The weekly observation shall not be conducted during periods of startup, shutdown, malfunction or maintenance. Observed visible emissions shall not be considered a reportable exceedance unless the subsequent VEE confirms a violation of the visible emission standard. Records of the observation and any corrective adjustment, maintenance or repair performed to correct the abnormal emission condition shall be kept in accordance with Condition III.C.2. A visual observation of an emission unit is not required during any calendar week in which a VEE has been performed on that emission unit.
Included as Condition III.B.1.

Recordkeeping

The permit includes requirements for maintaining records of all monitoring and testing required by the permit. These records include:

Applicable Requirements from the NSR Permit: The following recordkeeping requirements are applicable requirements for the fuel burning equipment from the NSR permit issued on September 12, 2003.

Condition 17: Fuel Certification - The permittee shall obtain a certification from the fuel supplier with each shipment of distillate oil. Each fuel supplier certification shall include the following: a. The name of the fuel supplier, b. The date on which the oil was received, c. The volume of distillate oil delivered in the shipment, d. A statement that the distillate oil complies with the American Society for Testing and Materials specifications for fuel oil numbers 1 and 2, and e. The sulfur content of the oil.
(9 VAC 5-80-1180 and 40 CFR)
Included as Condition III.C.1.

Condition 41 f, i, and j:

- f. a. The monthly and annual throughput of natural gas (in million cubic feet) and the daily, monthly, and annual throughput of distillate oil (in 1000 gallons) for the three boilers. The annual throughput shall be calculated as the sum of each consecutive twelve (12) month period.
- i. Boiler maintenance schedules and records of completed maintenance, including corrective adjustments, maintenance and repair to the boilers as a result of weekly visible emission observations or evaluations.
- j. Boiler operator training records.

Included as Condition III.C.2. a,e, and f.

Additional Periodic Monitoring Recordkeeping Requirements: The following recordkeeping requirement was added for periodic monitoring to meet Part 70 requirements:

All visible emission observations and evaluations
Included as Condition III.C.2.d.

Applicable Recordkeeping Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific recordkeeping requirements that have been determined to be applicable.

NSPS Subpart Dc: 40 CFR §60.7(b) - General Requirements. Records of occurrence of startups, shutdowns and malfunctions are required for all affected sources, of which boiler B003 is one.
Included as Condition III.C.2.g.

NSPS Subpart Dc: 40 CFR §60.7(g) - General Requirements. h. Records of all measurements associated with the Johnson boiler (B003), including continuous monitoring system, monitoring device, and performance testing measurements, all monitoring calibration checks, and all adjustments maintenance on these systems and devices, and future performance tests or future continuous monitoring systems installed to demonstrate compliance in lieu of visible emission evaluations or fuel certifications.
Included as Condition III.C.2.h.

NSPS Subpart Dc: 40 CFR §60.48c(e)(11) - Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units. Records of fuel supplier certifications if they are used for compliance. This requirement was duplicated by the NSR permit requirements and is satisfied using the wording of the NSR permit.
Included as Conditions III.C.1 and III.C.2.c.

Testing

The permit does not require source testing for B001, B002, or B003. A table of test methods has been included in the permit if testing is performed. The Department and EPA has authority to require testing not included in this permit if necessary to determine compliance with an emission limit or standard.

Since the permittee has the option of demonstrating compliance with the standard for sulfur dioxide by testing instead of by fuel certifications, in the unlikely event the permittee makes such a selection the applicable portions of 40 CFR §§60.8(f) and 60.44c(c) and (i) are included as *Condition III.D.2.*

Reporting

Applicable Requirements from the NSR Permit: The following reporting requirement is an applicable requirement for the fuel burning equipment from the NSR permit issued on September 12, 2003

Condition 42. The permittee shall submit fuel quality reports to the Director, Piedmont Regional Office within 30 days after the end of each semi-annual period. If no shipments of distillate oil were received during the semi-annual period, the semi-

annual report shall consist of the dates included in the semi-annual period and a statement that no oil was received during the semi-annual period. If distillate oil was received during the semi-annual period the reports shall include: a. The dates included in the semi-annual period, b. A copy of all fuel supplier certifications for all shipments of distillate oil received during the semi-annual period or a semi-annual summary from each fuel supplier that includes the information specified in Condition 17 for each shipment of distillate oil, and c. A signed statement from the owner or operator of the facility that the fuel supplier certifications or summaries of fuel supplier certifications represent all of the distillate oil burned or received at the facility.
Included as Condition III.E.1.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have reporting requirements that have been determined to be applicable.

NSPS Subpart Dc: 40 CFR §60.7(a)(i)(4) - General Provisions. A notification prior to making of physical or operational changes to an affected source is required.
Included as Condition III.E.2.

NSPS Subpart Dc: 40 CFR §60.8(d) - General Provisions. Notification 30 days prior to conducting any performance tests, in the unlikely event that the permittee should choose to do so under the flexibility afforded by the Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units.
Included as Condition III.E.3.

Streamlined Requirements

The following conditions in the September 12, 2003 NSR permit have not been included for the reasons provided:

9 VAC 5-40-880 et seq. Emission standards for Fuel Burning Equipment (Rule 4-8). The boilers B001, B002 and B003 are all subject to new and modified source standards under Section 5 of Virginia air regulations and the NSR permit dated October 22, 1999, which are more restrictive than the sulfur dioxide, particulate and visible emission standards of rule 4-8.

9 VAC 5-40-900 - Particulate matter emission limit for fuel burning equipment installations as determined by the equation $E = 1.0906H^{-0.2594}$, where E is the emission limit in lbs/mmBtu and H is the total capacity in mmBtu/hr. The limit is 0.34 lb/mmBtu based on the combined rated heat input of 92.3 mmBtu/hr for the three boilers, resulting in an maximum hourly emission rate of 31.12 lbs/hr many times the permitted emission rate.

9 VAC 5-40-930 - Sulfur dioxide emission limit for fuel burning equipment installations as determined by the equation $S = 2.64K$, where S is the emission limit in lbs/hr and K is the total heat input capacity in mmBtu/hr. The limit is 243.7lbs/hr based on the combined rated heat input of 92.3 mmBtu/hr for the three boilers, many times the permitted emission rate.

9 VAC 5-50-80 - The permitted visible emission limit of 20%, not to exceed 30% over any one six-minute period, is streamlined because it is less stringent than the NSR

permit condition limiting visible emissions to 10 percent opacity, not exceed 20 percent.

Publication Printing Process Applicable Requirements - [P001 through P013 and T001 through T021]

Limitations

Applicable Requirements from the NSR Permit: The following limitations are applicable requirements from the NSR permit issued on September 12, 2003. A copy of the permit is attached as attachment B.

Condition 3: Emission Control: Volatile organic compound (VOC) emissions from presses 740, 741, 742, 743, 744, the proof press, and the Renzmann Cylinder Wash (P001, P002, P003, P004, P005, P007, and P008) shall be controlled by carbon adsorption solvent recovery system (Solvent Recovery A: C001 and C002) with an overall control efficiency of 91 percent. Compliance with this condition shall be demonstrated through a VOC mass balance equation. The solvent recovery system (C001 and C002) shall be provided with adequate access for inspection.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
Included as Condition IV.A.1.

Condition 4: Emission Control: Volatile organic compound (VOC) emissions from Press 745 (P006) shall be controlled by 100 percent efficiency permanent total enclosure capture system and a dedicated carbon adsorption solvent recovery system (Solvent Recovery B: C003) having with an overall control efficiency of 97.7 percent. The printing press, permanent total enclosure, and carbon adsorption system shall be provided with adequate access for inspection.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
Included as Condition IV.A.2.

Condition 6: Emission Control Requirement - The permanent total enclosure for Press No. 745 shall meet the following criteria: a. Any natural draft openings shall be at least 4 equivalent opening diameters from each VOC emitting point; b. The total area of all natural draft openings shall not exceed 5 percent of the surface area of the enclosure's four walls, floor and ceiling; c. The average facial velocity of air through the natural draft openings shall be at least 200 feet per minute (0.013 mm Hg or 0.007 in H₂O if measured by a differential pressure gauge) and the direction of air flow shall be into the enclosure; d. All access doors and windows shall be closed during routine operation of the press; e. All of the exhaust gases from the enclosure shall be directed to the carbon bed adsorption system.
(9 VAC 5-80-1180)
Included as Condition IV.A.4.

Condition 5: Emission Standard - Volatile Organic Compound (VOC) emissions from the operation of each of the rotogravure presses (P001, P002, P003, P004, P005, and P006), excluding the proof press, shall not exceed 16 percent of the total mass of VOC solvent and water used at that press during any one performance averaging period. For continuing compliance purposes, the performance-averaging period is one calendar

month.
(9 VAC 5-170-160 and 9 VAC 5-50-410)
Included as Condition IV.A.5.

Condition 8: Throughput Limit - The Renzmann cylinder cleaning tank (P008) shall clean no more than 10,000 cylinders per year, calculated monthly as the sum of the number of cylinders cleaned over the previous consecutive twelve (12) month period.
(9 VAC 5-80-1180)
Included as Condition IV.A.7.

Condition 9: Throughput Limit - The annual throughput of VOC to the Presses No. 740, 741, 742, and 743 (P001, P002, P003, and P004) shall not exceed 10,585.5 tons per year, calculated monthly as the sum of the VOC throughput over the previous consecutive twelve (12) month period.
(9 VAC 5-80-1180)
Included as Condition IV.A.8.

Condition 10: Throughput Limit - The annual throughput of VOC to Press No. 744 (P005) shall not exceed 4115.1 tons per year, calculated monthly as the sum of the VOC throughput over the previous consecutive twelve (12) month period.
(9 VAC 5-80-1180)
Included as Condition IV.A.9.

Condition 11: Throughput Limit - The annual throughput of VOC to the proof press shall not exceed 50 tons per year, calculated monthly as the sum of the VOC throughput over the previous consecutive 12 months.
(9 VAC 5-80-1180)
Included as Condition IV.A.10.

Condition 12: Throughput Limit - The daily throughput of VOC to Press No. 745 (P006) shall not exceed 31,430 pounds per day. The throughput of VOC to Press No. 745 shall not exceed 4500 tons per year, calculated monthly as the sum of the VOC throughput over the previous consecutive 12 months.
(9 VAC 5-80-1180)
Included as Condition IV.A.11.

Condition 13: Throughput Limit - The annual throughput of VOC from paster glue to Press Nos. 740, 741, 742, 743, 744, 745, and the proof press (P001, P002, P003, P004, P005, P006, and P007) shall not exceed 1.5 tons per year, calculated monthly as the sum of the previous consecutive 12 months.
(9 VAC 5-80-1180)
Included as Condition IV.A.12.

Condition 19: Emission Limits - Volatile Organic Compound (VOC) emissions from the operation of the rotogravure presses as determined by mass balance calculation, actual press running hours, and VOC CEMS shall not exceed the limits specified below:

<u>Press No.</u>	<u>lbs/hr</u>	<u>lbs/day</u>	<u>tons/yr</u>
Press 740 (P001)	77.5	NA	226.8
Press 741 (P002)	82.4	NA	211.5
Press 742 (P003)	93.6	NA	273.7
Press 743 (P004)	82.4	NA	240.8
Press 744 (P005)	126.5	NA	370.4
Press 745 (P006)	54.7	880.0	126.0
Proof Press (P007)	1.0	NA	4.5
<u>Paster Glue (P0020)</u>	<u>0.4</u>		<u>1.5</u>
Total Press VOC Emissions	518.6		1429.2

Included as Condition IV.A.16.

Condition 20. Emission Limits -Toxic pollutant emissions, as limited by permit Condition 19 for each press as VOC, shall not exceed the percentages (by weight) of each component of the solvent blend as listed below:

hexane	1.00
benzene	0.01
toluene	96.00
ethyl benzene	2.00
xylene	5.16

(9 VAC 5-60-330)

Included as Condition IV.A. 17.

Condition 53. Condition IV.A.17. of this permit provides a list of HAPs to be emitted by the publication printing process equipment (P001 through P0013 and T001 through T021). A change in the amounts of these pollutants emitted and/or a change in your facility which results in the emissions of additional pollutants may require a permit to modify and operate.

(9 VAC 5-50-180, 9 VAC 5-50-260, and 9 VAC 5-80-110)

Included as Condition IV.A.18.

Condition 23. Emission Limits - Volatile Organic Compound (VOC) emissions from the operation of the Renzmann cylinder cleaning tank shall not exceed the limits specified below:

<u>lbs/hr</u>	<u>tons/yr</u>
13.4 (as xylene)	11.2

(9 VAC 5-50-260)

Included as Condition IV.A.15.

Condition 26. Visible Emissions Limits - Visible emissions from the carbon bed adsorption system (C003) dedicated to the Frankentahl press No. 745 (P006) shall not exceed 5% opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A). (9 VAC 5-50-80 and 9 VAC 5-50-20)
Included as Condition IV.A.14.

Condition 54: The exhaust stack heights for all carbon bed adsorber systems located at the printing facility shall be a minimum of 50 feet, as measured from ground level. There shall be no caps or downturns installed at the exit of any carbon bed adsorber exhaust stack.
(9 VAC 5-80-1180)
Included as Condition IV.A.19.

Condition 30: Except where this permit is more restrictive than the applicable requirement, the NSPS Subpart QQ equipment as described in Condition 2 shall be operated in compliance with the requirements of 40 CFR 60, Subpart QQ.
(9 VAC 5-50-400 and 9 VAC 5-50-410)
Included as Condition IV.A.24.

Condition 31: Except where this permit is more restrictive than the applicable requirement, the MACT Subpart KK equipment as described in Condition 2 shall be operated in compliance with the requirements of 40 CFR 63, Subpart KK.
(9 VAC 5-60-120)
Included as Condition IV.A.24

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific emission requirements that have been determined to be applicable.

9 VAC 5-20-180 F.2 requires that any facility subject to the provisions of 9 VAC 5, Chapter 60 to shut down immediately if it is unable to meet the applicable emission standards. This facility is subject to 40 CFR 63 Subpart KK.
Included as Condition IV.A.23.

9 VAC 5-50-20 F (Existing Sources. Compliance) requires the owner/operator to take measures to the extent practicable to minimize VOC emissions including storage of VOC in closed containers. (P009 through P013). This general requirement has been made specific (and therefore enforceable as a practical matter).
Included as Condition IV.A.3.

9 VAC 5-50-80 (Standard for Visible Emissions) requires that "...no owner or other person shall cause or permit to be discharged into the atmosphere any visible emissions which exhibit greater than 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity." This requirement applies to emissions from all three carbon adsorber control device stacks (S001, S002 and S003), except that the NSR

permit BACT requirement of 5% opacity is more restrictive. So this less restrictive requirement has been streamlined for the one adsorber stack (S003) in *Condition IV.A.14*, but remains valid for stacks (S001 and S002).
Included as Condition IV.A.13.

9 VAC 5-50-260 (Emission Standards for New and Modified Sources, Standards for stationary sources) requires BACT to be applied for all new and modified sources. BACT for similar sources, such as cold cleaners, requires waste VOC to be stored in closed containers until disposed of by reclamation or incineration (see 9 VAC 5-40-3290 C.2.a and D.1 and 2). These specific standards are applied to the cylinder correction tanks P009 through P013 because there is no other specific standard applied under Section 5 (new and modified sources) and the sources were exempt from permitting requirements when installed. It also ensures that the correction cylinder operations remain wipe-cleaning operations instead of cold cleaning operations subject to other requirements. 9 VAC 5-50-260 is used as a reference in other BACT determinations for press and parts cleaner controls, but is subsumed by the more specific BACT determination of the NSR permit condition. Daily VOC emission recordkeeping for the cylinder correction stands is not required because the facility has shown that the VOC solvent used at the stands is reclaimed. A master meter accounts for all of the VOC used in the pressroom.
Included as Condition IV.A.3.

9 VAC 5-50-270 (Standards for New and Modified Sources, Standards for major stationary sources (nonattainment areas)) requires LAER to be applied when press 745 (P006) was installed. This requirement for LAER is subsumed by the more specific LAER determination of the NSR permit condition.
Included as Condition IV.A.2.

NSPS QQ: 40 CFR §60.432 requires each affected facility to discharge no more VOC than that equal to or less than 16 percent of the total mass of VOC and water used during one performance averaging period. Each press (except the proof press) are affected facilities under this regulation (P001 through P006).
Included as Condition IV.A.5.

MACT KK: 40 CFR §63.6(e)(3) requires a startup, shutdown and malfunction plan be developed and implemented for the affected facility and describes what the plan will contain, malfunctions to be corrected as soon as practicable in accordance with the startup, shutdown and malfunction plan, describes the operating requirement for the affected facility during periods of startup, shutdown and malfunction. The malfunction plan applies to the solvent recovery units since the press operations startup and shutdown several times per day. The Department spoke with the author of the MACT, Mr. Dave Salman and he indicated that it is not the intention of the MACT to have a plan for each press. Therefore the MACT regulatory language was changed from "source" to Solvent Recovery System" to clarify the intention of the regulation.
Included as Conditions IV.A.20 and 21.

MACT KK: 40 CFR §63.824(b) requires the source to limit the emission of HAPs to no

more than 8 percent of the volatile matter used each month on a plant-wide basis. The affected facilities include all presses, and all equipment ancillary to the proper operation of those presses (P001 through P014, and T001 through T021).
Included as Condition IV.A.6.

Monitoring

Applicable Requirements from the NSR Permit: The following monitoring requirements are applicable requirements from the NSR permit issued on September 12, 2003. A copy of the permit is attached as attachment B.

Condition 29: The carbon bed adsorption system for Press No. 745 shall be equipped with continuous emission monitors which measure and record the concentration of volatile organic compounds and shall be equipped with a device which calculates and records a 24 hour average VOC removal efficiency and which demonstrates compliance daily with the VOC removal efficiency requirement of Condition 4. The continuous emissions monitors shall be located at the carbon bed adsorption system inlet plenum and exhaust stack and shall be maintained, located, and calibrated in accordance with approved procedures. A 30 day notification, prior to the demonstration of continuous monitoring system's performance, and subsequent notifications shall be submitted to the Director, Piedmont Regional Office.
Included as Condition IV.B.2.

Condition 35: A continuous emission monitor shall be installed to measure and record the concentration of volatile organic compound emitted from the solvent recovery systems. It shall be maintained and calibrated in accordance with vendor recommendations.
Included as Condition IV.B.1.

Condition 36: The permanent total enclosure for Press No. 745 shall be equipped with a device which continuously measures differential pressure drop across the enclosure boundary or which continuously measures the face velocity of air flow into the enclosure to determine compliance with Condition 7.c. The device shall be maintained, located, and calibrated in accordance with approved procedures.
Included as Condition IV.B.3.

Short term emission limits. Because hourly emission limits are based upon the assumption that all applied VOC that is not recovered, is emitted (a liberal assumption) and the rated hourly VOC application rate of the press is many times the rate that could actually be applied to any usable product, the predicted hourly emission rate cannot be exceeded if the overall control requirements are met. Other than periodic monitoring of the control requirements, no monitoring was required to demonstrate periodic compliance with hourly emission limits in the NSR permit.

Long term throughput and emission limits. Records required by Condition 41. of the NSR permit provides assurance of periodic compliance with annual throughput and

emission limits. No further monitoring was required.

Toxic pollutant emission limits. Condition IV.A.17. limits the percentage (by weight) of each toxic component of the solvent blends to assure compliance. The facility is required by Condition IV.C.1.b. to have current coating data available at the facility to show compliance.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific monitoring requirements that have been determined to be applicable.

40 CFR §60.434(a) requires that the owner/operator keep records of solvent used and recovered, and to use the temperatures and densities used under the recent performance test (except under allowed circumstances) to calculate an emission percentage each performance averaging period in accordance with procedures in §60.433(b) through (g).

Included as Condition IV.B.8.

40 CFR §60.433(e), (f) and (g). Paragraphs (b) through (g) provides procedures for the calculation of emission percentage, of which applicable portions of (e), (f) and (g) pertain to the way the monitoring calculation may be done, as opposed to that a device be installed, maintained and operated to monitor the cumulative amount of volatile matter recovered for use in the calculations of effective organic HAP control efficiency (Re).

Included as Condition IV.B.8.

40 CFR §63.824(b)(i)(D) requires that a device be installed, maintained and operated to monitor the cumulative amount of volatile matter recovered for use in the calculations of effective organic HAP control efficiency (Re).

Included as Condition IV.B.4.

Additional Periodic Monitoring Requirements: The following specific monitoring requirements have been added to meet Part 70 requirements:

The permittee will check the compliance of the permanent total enclosure with the requirements of the applicable limitation requirement prior to startup of the press and not less than once per day while operating. This condition assures periodic compliance with Condition IV.A. 4. of this permit.

Included as Condition IV.B.5.

The permittee will use monthly liquid - liquid mass balances to demonstrate periodic compliance on a monthly basis with the overall control efficiency requirements of conditions IV.A.1. and 2 of this permit.

Included as Condition IV.B.7.

Short term emission limits. Because hourly emission limits are based upon the

assumption that all applied VOC that is not recovered, is emitted (a liberal assumption) and the rated hourly VOC application rate of the press is many times the rate that could actually be applied to any usable product, the predicted hourly emission rate cannot be exceeded if the overall control requirements are met. Other than periodic monitoring of the control requirements, no periodic monitoring is required to demonstrate periodic compliance with hourly emission limits in this permit.

Daily records are required to determine compliance with the emission limits for Press No. 745 (P006) which may be demonstrated as per AQP-4 which is required for each press line on a daily basis.

Long term throughput and emission limits. Records required by *Condition IV.C.1.* of this permit provides assurance of periodic compliance with annual throughput and emission limits. No further periodic monitoring is required.

Toxic pollutant emission limits. Records required by the MACT *Condition IV.C.3.* of this permit may be used to provide assurance of periodic compliance with the required limits on the percentages of toxics in inks applied (includes thinning solvents. The limits were originally set at the maximum percentages (inks as applied - including thinning solvents, etc) that each constituent could be found in the inks for all possible printed products (total greater than 100%). No further monitoring is required by this permit.

Recordkeeping

Applicable Requirements from the NSR Permit: The following recordkeeping requirements are applicable requirements from the NSR permit issued on September 12, 2003. A copy of the permit is attached as attachment B.

Condition 41 a.b.c.d.e.h. The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit and shall be consistent with DEQ policy. The content of and format of such records shall be arranged with the Director, Piedmont Regional Office. These records shall include, but are not limited to:

- a. Daily records demonstrating compliance with the requirements in Air Quality Program Policies and Procedures, Number AQP-4.
- b. Monthly records demonstrating compliance with the requirements in 40 CFR 60.434 (NSPS, Subpart QQ).
- c. Monthly records of the number of cylinders cleaned in the Renzmann cylinder cleaning tank, and the number of cylinders cleaned over the previous consecutive 12 month period.
- d. Monthly material balance of VOC used at the facility over the previous 12 month period, to include:

- i. Throughput of VOCs used at the new Frankenthal press No. 745 and the proof press;
 - ii. Throughput of VOCs from the presses that is disposed of off site;
 - iii. Amount of VOC recovered by each of the carbon bed recovery systems;
 - iv. Calculation of emissions by solvent recovery system A and B, respectively
 - v. Total throughput of VOC used at presses No. 740, 741, 742, and 743, and throughput of VOC used at press No. 744;
 - vi. Total throughput of VOC used by the Renzmann cylinder cleaning tank; and
 - vii. Throughput of VOC used as a result of the paster gluing process.
- e. Records for the total enclosure, the carbon bed adsorption systems and continuous emission monitoring systems, to include:
- i. Manufacturer's recommendations for carbon bed replacement;
 - ii. Records of actual carbon bed replacement;
 - iii. Records to demonstrate completion of all monitoring equipment calibrations, checks and tests;
 - iv. Carbon bed inlet gas VOC concentrations, as applicable, and exhaust gas VOC concentrations;
 - v. Calculated 24 Hour Average VOC Recovery Efficiency (Press 745 only);
- h. Annual inspection records of the cyclones at the waste paper handling system.

Included as Condition IV.C.1.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific recordkeeping requirements that have been determined to be applicable.

9 VAC 5-50-50 G and 9 VAC 5-20-121 AQP-4 (together) require that any new or modified source subject to the VOC standards for a printing process keep daily records as specified in the Air Quality Procedures. This printing facility is subject to 9 VAC 5-50-260 and 270 for the control of volatile organic compounds at the facility, so the applicable parts of AQP-4 are included as *Condition IV.C.1*. This also demonstrates compliance with the Rule 4-36 which is averaged over 24 hours.

9 VAC 5-50-50 B requires the owner/operator of facilities subject to 9 VAC 4-50-410 to maintain records of the occurrence and duration of any startup, shutdown or malfunction in the operation of the affected sources, any malfunction of the control equipment or periods in which a continuous monitoring system of device is inoperative.

Included as Condition IV.C.3. and 5.

40 CFR §60.7(b) - General Requirements. Records of occurrence of startups, shutdowns and malfunctions are required in the operation of all affected sources (all of the presses except for the proof press, P001 through P006) and any malfunction of the control equipment or periods in which a continuous monitoring system of device is inoperative.

Included as Conditions IV.C.3. and 5.

40 CFR §60.433(b) through (g) - Records of the amount, density variations, VOC content, and the solvent added (or used for cleaning), of inks used and of solvent recovered, which will be used in the calculation of emission percentage (P). Also includes procedures and equations for calculating P.

Included as Condition IV.C.2.

40 CFR §60.434(a)(1) through (5) - Records of the amount, density variations, VOC content, and the solvent added (or used for cleaning), of inks used and of solvent recovered, which will be used in the calculation of emission percentage (P) for periodic monitoring.

Included as condition IV.C.2.

40 CFR §63.829(b) references §63.10(b)(1), which requires certain records be kept for certain periods.

Included as Condition IV.C.3

40 CFR §63.829(b)(1) references §63.10(b)(2), which requires certain records be kept periods of startup, shutdown, and malfunction and all measurements and results of performance tests. Some of these records duplicate records required by 40 CFR §60.7(b).

Included as Condition IV.C.3.

40 CFR §63.829(b)(2) references §63.10(b)(3), which requires records be kept of applicability determinations and notifications required in §63.9(b)(1) and (h). *Included as Condition IV.C.3.*

40 CFR §63.829(c) requires records be kept of all material balances. *Included as Condition IV.C.3.*

Additional Periodic Monitoring Requirements: No additional recordkeeping requirements were added for periodic monitoring to meet Part 70 requirements.

Testing

The permit does not require any performance testing to satisfy 40 CFR 63, Subpart KK, since §63.827(a)(ii)(3) specifies that none is required for sources which are controlled by solvent recovery systems and the owner chooses to comply by liquid-liquid material balance.

Applicable Requirements from the NSR Permit: There are no testing requirements applicable from the NSR permit issued on September 12, 2003. Initial testing was completed satisfactorily on October 18 and 19, 1995, with results reported to DEQ on November 27, 1995.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have testing requirements that have been determined to be applicable.

9 VAC 5-50-30 B provides the DEQ with the authority to set testing guidelines. Guidelines for determining volatile matter mass and organic HAP mass are provided since they are used in the recordkeeping.

40 CFR §60.433 requires initial performance testing for emission percentage (P). This testing was completed on October 18 and 19, 1995 and reported to DEQ on November 27, 1995. There are no further testing requirements required under 40 CFR §60.433 once initial performance testing has been satisfactorily completed. Monitoring required by 40 CFR §60.434 fulfills all continuing compliance requirements. This requirement was streamlined out.

40 CFR §60.431 - Definitions provide the terms for calculations of emission percentage (P). These terms are also used for monitoring, and so are kept in this permit even though no further performance testing is required.
Included as part of Condition IV.D.1.

40 CFR §60.433 - Equations from this section provide the method of calculating emission percentage (P) and are also used for monitoring, so they are kept in this permit. The equations were simplified to exclude water terms, since the source specified that no inks containing water would be used at the plant. In the event that some inks containing some water are used, these equations will calculate compliance conservatively.
Included as part of Condition IV.D.1.

40 CFR §63.435(a),(b) and (d) provide the applicable requirements for the determination for VOC content and density in solvent-based inks for use in *Condition IV.C.2*.
Included as Condition IV.D.1.

40 CFR §63.822 - Definitions provide the terms for calculations of overall effective organic HAP control efficiency (Re). These terms are also used for monitoring, and so are kept in this permit even though no performance testing is required.
Included as Condition IV.D.2.

40 CFR §63.824(b)(1)(i)(F) - Equations from this section provide the method of calculating overall effective organic HAP control efficiency (Re). These terms are also used for monitoring, and so are kept in this permit even though no performance testing is required.

Included as Condition IV.D.2.

40 CFR §63.824(b) provides three methods for determining organic HAP content.

Included as Condition IV.D.2

40 CFR §63.827(c)(1) and (3) provide two methods for determining volatile matter content.

Included as Condition IV.D.3.

Reporting

Applicable Requirements from the NSR Permit: There are no applicable reporting requirements from the NSR permit issued on September 12, 2003. A copy of the permit is attached as attachment B.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have reporting requirements that have been determined to be applicable.

40 CFR §60.7(a)(4) - General Provisions. Notification within 15 days of any physical or operational change which may increase the emission rate of a pollutant subject to a standard under NSPS subpart QQ.

Included as Condition IV.E.4.

40 CFR §60.8(d) - General Provisions. Notification 30 days prior to conducting any performance tests for compliance with an NSPS standard. Since the NSPS Subpart QQ performance test is required only once, and monitoring is required thereafter, no further testing is anticipated. This requirement is streamlined.

40 CFR §63.9(b) required a notification of initial applicability and specifies information to be included in that report. This notification was submitted on April 22, 1998. Since the one-time require was satisfactorily completed, the requirement was streamlined.

40 CFR §63.9(h) required specific and periodic notifications of compliance status. Since the 9 VAC 5-80-110 K.5 duplicates this requirement, this requirement was streamlined and was included in *Condition IV.E.4.*

40 CFR §63.9(i) required that notification of a change to information already provided as required under §63.9 be provided.

Included as Condition IV.E.4.

40 CFR §63.10(d)(5)(i) requires periodic startup, shutdown, and malfunction reports containing specific information listed in the requirement if all actions taken are consistent

with the plan required by §63.6(e)(3).

Included as Condition IV.E.2.

40 CFR §63.10(d)(5)(ii) requires immediate startup, shutdown, and malfunction reports containing specific information listed in the requirement if the actions taken are not consistent with the plan required in §63.6(e)(3).

Included as Condition IV.E.3.

40 CFR §63.10(e) requires semiannual excess emission and summary reports be submitted with specific information included in the report.

Included as condition IV.E.1.

40 CFR §63.830(b)(1) requires an initial notification of applicability as required in semiannual excess emission and summary reports be submitted in accordance with §63.9(b) with specific information included in the report. This notification was submitted on April 22, 1998. Since the one-time requirement was satisfactorily completed, the requirement was streamlined.

40 CFR §63.830(b)(3) requires required specific and periodic notifications of compliance status referencing §63.9(h) for content. Since the 9 VAC 5-80-110 K.5 duplicates this requirement, this requirement was streamlined and was included in *Condition IV.E.4.*

40 CFR §63.830(b)(5) and (5)(i) require periodic and immediate startup, shutdown, and malfunction reports referencing §63.6(e)(3). The requirements are streamlined and included as *Condition IV.E.2. and 3.*

40 CFR §63.830(b)(6)(i) requires semiannual excess emission and summary reports be submitted and reference §63.10(e). The requirements are streamlined and included as *Condition IV.E.1.*

Streamlined Requirements

Limitations. Emission Controls and Work Practices: The applicable general requirements of 9 VAC 5-50-20 F (Standard for VOC) and 9 VAC 5050-260 (BACT) were both subsumed by a more specific enforceable permit BACT requirements generated from parts of 9 VAC 5-20-F and 9 VAC 5-40-3290 D.

Limitations. Visible Emission Limit: The applicable requirement from Condition 26 of the NSR permit issued on September 12, 2003 was based LAER and is more restrictive than either the 9 VAC 5-50-80 general visible emission requirement that it subsumes, or the 9 VAC 5-50-270 LAER requirements, which it subsumes. The wording of the NSR permit requirement is retained in this permit.

Recordkeeping. Compliance Records for the Printing and Publishing MACT: 40 CFR §63.829(b) and §63.10(b) duplicate recordkeeping requirements, which have been streamlined to one set of requirements. The required records for periods of startup, shutdown and

malfunction required by 9 VAC 5-50-50B and by 40 CFR §60.7(b) for the NSPS are also duplicated and are streamlined as paragraphs c, d, and e of *Condition IV.C.3*.

Recordkeeping. Additional Permit Compliance Records: 40 CFR §60.7(b) and 9 VAC 5-50-50 B also includes a requirement for records for periods in which continuous monitoring systems and devices are inoperative. Since these requirements applied to continuous monitoring systems and devices that were not required by the MACT, these requirements were streamlined and added to the NSR permit condition 41 recordkeeping requirements included as *Condition IV.C.1 and 5*.

Reporting: Emission and Summary Reports: 40 CFR §63.830 references §63.10(e). The requirements are streamlined and included as condition IV.E.1.

Reporting: Periodic Startup, Shutdown and Malfunction Reports: 40 CFR §63.830 (b)(5) references §63.10(d)(5). The requirements are streamlined and included as condition IV.E.2.

Streamlined Requirements

9 VAC 5-40-5060 et seq. Emission standards. Flexographic, Packaging, and Publication Printing Lines (Rule 4-36). The presses P001 through P007 are all subject to new and modified source standards under Section 5 of Virginia air regulations and the NSR permit dated September 12, 2003, which are more restrictive than the VOC emission standards, control requirements, testing, recordkeeping, monitoring and reporting requirements of rule 4-36.

9 VAC 5-40-5080 - The permitted add-on control requirements of 91% for P001 through P005, and P007 and the control requirement of 98% for P006 are much more restrictive than the 75% control requirement of this standard.

9 VAC 5-40-5090 - The permitted visible emission limits of 5% (C003), and the permitted emission limit of 10%, not to exceed 20% over any one six-minute period (C001 and C002), is much more restrictive than the 20%, not to exceed 60% of this standard.

CYLINDER ELECTROPLATING PROCESS REQUIREMENTS [P015]

Limitations

Applicable Requirements from the NSR Permit: The following are applicable limits contained in the NSR permit issued on **September 12, 2003**

Condition 32: **MACT Subpart N Requirements by Reference** - Except where this permit is more restrictive than the applicable requirement, the MACT Subpart N equipment as described in condition 2 shall be operated in compliance with the requirements of 40 CFR 63, Subpart N.
(9 VAC 5-60-120)
Included as Condition V.A. 1.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific emission requirements that have been determined to be applicable.

9 VAC 5-20-180 F.2. requires that any facility subject to the provisions of 9 VAC 5, Chapter 60 to shut down immediately if it is unable to meet the applicable emission standards. This facility is subject to 40 CFR 63 Subpart N.
Included as Condition V.A.7.

9 VAC 5-50-80 (Standard for Visible Emissions) requires that "...no owner or other person shall cause or permit to be discharged into the atmosphere any visible emissions which exhibit greater than 20% opacity, except for one six-minute period in any one hour of not more than 30% opacity." This requirement applies to emissions from the demister filter pad control device (C004) stack (S008).
Included as Condition V.A.2.

40 CFR §63.342(b)(1) (Standards for hard chromium electroplating tanks) requires the applicable standard to apply during tank operation and also during startup and shutdown.
Included as part of Condition V.A.3.

40 CFR §63.342(c) (Standards for hard chromium electroplating tanks) requires each owner or operator of an affected source to control chromium emission discharged by not allowing the concentration in the exhaust stream to atmosphere to exceed 6.6×10^{-6} gr/dscf.
Included as part of Condition V.A.3.

40 CFR §63.343(c) requires the demister filter control system be operated within 1 inch of the pressure drop recorded during the performance test of within a range of compliant values established during several performance tests.
Included as part of Condition V.A.4.

40 CFR §63.342(f) requires certain work practice standards be implemented for specific control devices. The applicable work practices for the demister filter and the associated monitoring device from (f).

Included as Condition V.A.5.

40 CFR §63.342(f)(3) requires an operation and maintenance plan be developed and implemented for the affected facility and describes what the plan will contain from Table 1.

Included as Condition V.A.6.A.

Monitoring

Applicable Requirements from the NSR Permit: There are no applicable monitoring requirements contained in the NSR permit issued on **September 12, 2003**.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific monitoring requirements that have been determined to be applicable.

9 VAC 5-60-40 C. requires the owner to install, calibrate, maintain and operate monitoring devices/systems in accordance with procedures acceptable to the board.

Included as Condition V.B.2.

MACT Subpart N: 40 CFR §63.344(c) requires that the owner/operator install and operate a monitoring device specific to the control device (differential pressure monitor for the demister filter.)

Included as Condition V.B.3.

MACT Subpart N: 40 CFR §60.3434(d)(2) gives requirements for installing and verifying status of a monitoring device.

Included as Condition V.B.2.

MACT Subpart N: 40 CFR §63.343(c) requires that the pressure drop be monitored and recorded daily when the tank is operating.

Included as Condition V.B.2..

Additional Periodic Monitoring Requirements: No specific monitoring requirements have been added to meet Part 70 requirements:

No Visible Emissions Monitoring. No visible emissions have ever been observed from the demister filter pad, and at the capacity of the electroplating tank, even uncontrolled, no visible emissions are expected. Periodic monitoring in support of the applicable visible emission standard in *Condition V.A.2.* is not required by this permit.

Recordkeeping

Applicable Requirements from the NSR Permit: There are no applicable recordkeeping requirements contained in the NSR permit issued on **September 12, 2003**.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific recordkeeping requirements that have been determined to be applicable.

9 VAC 5-50-50 F. requires that any new and modified source keep sufficient records to determine its emissions.

Included as Condition V.C.1

9 VAC 5-60-50 B. requires the owner/operator of facilities subject to 9 VAC 5-60-70 to maintain records of the occurrence and duration of any startup, shutdown or malfunction in the operation of the affected sources, any malfunction of the control equipment or periods in which a continuous monitoring system of device is inoperative.

Included as Condition V.C.3.

40 CFR §63.10(a), (b)(1) and (d)(1)7(b) are referenced by §63.346(a) and give general recordkeeping requirements for the records required by the subpart.

Included in Condition V.C.1

40 CFR §60.342(f)(3)(v) requires records of maintenance plans to be maintained for specific periods.

Included as Condition V.C.2.

40 CFR §60.346(b) and (c) requires records of maintenance, monitoring, tests, inspections malfunctions, periods of excess emissions, notifications and reports.

Included as Condition V.C.1.

Testing

Applicable Requirements from the NSR Permit: There are no applicable testing requirements contained in the NSR permit issued on **September 12, 2003**.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have testing requirements that have been determined to be applicable.

All initial performance tests that were previously required under 9 VAC 5-60-30A to support conditions *Condition V.D.3, 4, and 5* were completed in October, 1995. The Department and EPA have authority under 9 VAC 5-60-30 K to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. A table of test methods has been included in the permit in the event that testing is performed.

9 VAC 5-60-30 A and B provides guidance on conducting and reducing data.

Included as Condition V.D.2.

9 VAC 5-60-30 C requires the source to test in accordance with a test plan approved by the DEQ.

Included as Condition V.D.3.

9 VAC 5-60-30 E provides guidance on conducting test runs.

Included as Condition V.D.4.

9 VAC 5-60-30 F requires that the owner provide the means for safe testing.

Included as Condition V.D.6.

40 CFR §63.7(a), (d) and (e) requires initial performance testing, approval of a site-specific test plan, guidance on how to conduct the test, guidance on test runs, the results, and testing facilities. (40 CFR 63.7(b) applies to notifications and is handled under Title V "E. Reporting".) 40 CFR 63.7 (d) and (e) are included as *Conditions V.D. 1, 2, 3, 4, and 6*. Initial performance testing in accordance with 40CFR 63.7(a) was completed on October 18 and 19, 1995, but 40 CFR 63.7(a) also provides the test plan requirement, so in case further testing is required, that portion has been included as part of *Condition V.D.2*.

40 CFR §63.344(c) provides the approved test method and guidance on the test runs.

Included as part of Condition V.D.1. and 2.

Reporting

Applicable Requirements from the NSR Permit: There are no applicable reporting requirement contained in the NSR permit issued on **September 12, 2003**.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have reporting requirements that have been determined to be applicable.

40 CFR §63.9(i) requires any information that has been provided as required under this Subpart (A and N) that has changed, to be updated within 15 days.

Included as Condition V.E.5.

40 CFR §63.344(a) requires test results to be reported with specific information. Although initial testing has been completed, further testing may be required, so the requirements were not streamlined.

Included as Condition V.E.2.

40 CFR §63.347(d) requires notification of performance tests. Although initial testing has been completed, further testing may be required, so the requirements were not streamlined.

Included as Condition V.E.5.

40 CFR §63.347(f) requires how test results shall be submitted.

Included as Conditions V.E.1 and 2.

40 CFR §63.347(g)(2) provides for the reduction in frequency of the ongoing compliance status reports.

Included as Condition V.E.4.

40 CFR §63.347(g)(3) provides the content of the ongoing compliance status reports.

Included as Condition V.E.3.

Streamlined Requirements

Testing. The Site-Specific Test Plan: The applicable requirements 9 VAC 5-60-50 B are more general than the requirements from 40 CFR 63.7 and 63.344(a) just references the general provisions of 40 CFR 63.7. The requirements of 40 CFR 63.7 are retained in this permit.

Testing. Conduct of Performance Tests and Test Runs: The applicable requirements of 9 VAC 5-60-30 C and E and 40 CFR 63.344(c) were all subsumed by the more specific requirements of 40 CFR 63.7(e).

Testing. Performance Test Report: The applicable requirements of 9 VAC 5-60-30 E and 40 CFR 63.347(f) were all subsumed by the more specific requirements of 40 CFR 63.344(a).

Testing. Ongoing Compliance Status Report: The applicable requirements of 9 VAC 5-60-30 E and F were all subsumed by the more specific requirements of 40 CFR 63.347(g)(3).

Testing. Requests to Reduce the Frequency: The applicable requirements of 9 VAC 5-60-30 E were subsumed by the more specific requirements of 40 CFR 63.347(g)(2).

Testing. Ongoing Compliance Status Report: The applicable requirements of 9 VAC 5-60-50 E and F were all subsumed by the more specific requirements of 40 CFR 63.347(g)(3).

40 CFR 63.347(c) requires an initial notification of applicability and specifies information to be included in that report. This notification was submitted on April 22, 1998. Since the one-time require was satisfactorily completed, the requirement was streamlined.

Streamlined Requirements

9 VAC 5-40-320 Emission standards for General Processes, Standard for Visible Emissions The chromium electroplating tank P015 is subject to new and modified source standards under Section 5 of Virginia air regulations, which is more restrictive than this visible emission standard.

WASTE PAPER HANDLING PROCESS APPLICABLE REQUIREMENTS - [P017, P018, P019]

Limitations

Applicable Requirements from the NSR Permit: The following limits are applicable requirements from the NSR permit issued on September 12, 2003. A copy of the permit is attached as attachment B.

Condition 7: Emission Controls - Particulate and PM10 emissions from the operation of the waste paper handling system shall be controlled by proper operation and maintenance of the waste paper handling system including the cyclone and baghouse units (P017, P018, and P019). The cyclones shall be provided with adequate access for inspection. An annual inspection shall be conducted on the cyclone for the purpose of identifying leaks, cracks, or other structural problems. The baghouses shall meet a control efficiency of 90%.
(9 VAC 5-80-1180 and 9 VAC 5-50-260)
Included as Condition VI.A.1

Condition 28: Visible Emissions Limits - Visible emissions from the waste paper handling system shall not exceed 5 percent opacity as determined by EPA Method 9 (reference 40 CFR 60, Appendix A).
(9 VAC 5-50-80 and 9 VAC 5-50-20)
Included as Condition VI.A.2

Condition 24: Emission Limits - Emissions vented outside of the building from the waste paper handling system shall not exceed the limits specified below. Annual emissions shall be calculated as the sum of each consecutive 12 month period:

Total Suspended Particulates	0.01 grains/dscf	0.3 lb/hr	1.4 tons/yr
PM ₁₀	0.01 grains/dscf	0.3 lb/hr	1.4 tons/yr

These emissions are derived from the estimated overall emission contribution from operating limits. Exceedance of the operating limits shall be considered credible evidence of the exceedance of emission limits. Compliance with these emission limits may be determined as stated in Condition number(s) 7, 28, 37, and 41.
(9 VAC 5-50-260)
Included as Condition VI.A.3

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific emission requirements that have been determined to be applicable.

9 VAC 5-50-80 (Standard for Visible Emissions) requires that "...no owner or other person shall cause or permit to be discharged into the atmosphere any visible emissions which exhibit greater than 20% opacity, except for one six-minute period in any one hour

of not more than 30% opacity.” This requirement applies to emissions from all paper handling systems. The visible emissions limit in the NSR permit is more stringent, and has been included as *Condition VI.A.2* instead of the applicable Virginia Regulation.

9 VAC 5-50-260 (Emission Standards for New and Modified Sources, Standards for stationary sources) requires BACT to be applied for all new and modified sources. BACT was proposed by the source to be fabric filter baghouses with a design control efficiency of 90 percent. This design control efficiency is lower than other similar units. The waste paper handling system was transferred from another facility and no information has been located on the system. The waste paper handling system has been observed by agency staff. Most waste is large, edge trimmings that ends up in a bailer. The particulate that does not get bailed is very fine paper dust particles which are vented to the baghouses. The exhaust exiting the baghouses is then re-introduced into the indoor air ventilation. *Included as Condition VI.A.1.*

BACT also includes written operating procedures for the process equipment and air pollution control equipment.
Included as Condition VI.A.4.

Monitoring

Applicable Requirements from the NSR Permit: The following are applicable limits contained in the NSR permit issued on September 12, 2003.

Condition 37: Monitoring Device - The baghouses at the waste paper handling system shall be each equipped with a device to continuously measure the differential pressure drop across the fabric filter. The devices shall be installed in an accessible location and shall be maintained by the permittee such that it is in proper working order at all times.
(9 VAC 5-50-260)
Included as Condition VI.B.1.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific monitoring requirements that have been determined to be applicable.

9 VAC 5-50-260 BACT for fabric filter baghouses also includes the installation, calibration and maintenance and operation of a means of measuring the differential pressure across the fabric filter.
Included as Condition VI.B.1.

Additional Periodic Monitoring Requirements: The following specific monitoring requirements have been added to meet Part 70 requirements:

Visible Emissions Monitoring with Outdoor Exhaust. Although the source has certified that the baghouses vent internally to the building, they have the ability to be vented outside of the building. The facility will be required to perform visible emissions

evaluations each time the source vents outside of the building. Since the building nearly meets the EPA requirements for a total enclosure, no visible emissions are expected for normal operation.

Condition VI.B.2.

Periodic Monitoring of Waste Paper Handling System. The source is required to monitor and record the differential pressure drop across the fabric filters that control the emissions from the Waste Paper Handling System at least once per week that it is operating.

Condition VI.B.3.

Short term emission limits and. long term throughput and emission limits. Records required by Condition 41 g. of the NSR permit provide assurance of periodic compliance with annual hour and emission limits. No further periodic monitoring is required.

Recordkeeping

Applicable Requirements from the NSR Permit: The following are applicable recordkeeping requirements contained in the NSR permit issued on September 12, 2003:

Condition 41.g and h: g. The number of hours of operation that the waste paper handling system is vented to outside the building.
h. Annual inspection records of the cyclones at the waste paper handling system.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific recordkeeping requirements that have been determined to be applicable.

9 VAC 5-50-50 F. requires that the source keep necessary records sufficient to determine emissions.

Additional Periodic Monitoring Requirements: The following are additional recordkeeping requirements were added for periodic monitoring to meet Part 70 requirements:

Weekly Records of the differential pressure drop monitoring.
Condition VI.C.1.d.

Testing

Applicable Requirements from the NSR Permit: There are no applicable testing requirements contained in the NSR permit issued on September 12, 2003.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have testing requirements that have been determined to be applicable.

9 VAC 5-50-30 A. requires that testing be conducted in accordance with approved test methods approved by the DEQ.
Included as Condition VI.D.2.

9 VAC 5-50-30 C. requires that testing be conducted under conditions approved by the DEQ.
Included as Condition VI.D.2.

No initial performance tests are required under 9 VAC 5-50-30A to support *Conditions VI.A. 1, 2 and 3*. The Department and EPA have authority under 9 VAC 5-50-30 G to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. A table of test methods has been included in the permit in the event that testing is performed.

Reporting

Applicable Requirements from the NSR Permit: There are no applicable reporting requirements contained in the NSR permit issued on September 12, 2003.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have reporting requirements that have been determined to be applicable.

9 VAC 5-50-50 A.4. requires that the source give the DEQ 30 days notice prior to the date of conducting performance testing.
Included as Condition VI.E.1.

Streamlined Requirements

9 VAC 5-40-260 Emission Standards for General Processes, Standard for particulate matter: The waste paper handling systems are subject to BACT for particulate matter, and the resulting emission limits (0.3 lbs/hr and 1.4 tons/yr for both together) are more restrictive than the limits of the existing source rule (processing capacity (P) is a total of 10 tons/hr):

Particulate Emission Standard (E)(lbs/hr) = $4.10 \times (P)^{0.67} = 19.1 \text{ lbs/hr}$ (> 0.3 lbs/hr)
Long term particulate emission limit = $19.1 \text{ lbs/hr} \times 8760 \text{ hrs/yr} \times 1 \text{ tons}/2000 \text{ lbs} = 83.9 \text{ tons/yr}$ (> 1.4 tons/yr)

9 VAC 5-40-320 Emission standards for General Processes, Standard for Visible Emissions The waste paper handling systems are subject to the visible emission limit new and modified source standard under Section 5 of Virginia air regulations, which is more restrictive than this visible emission standard.

FACILITY-WIDE APPLICABLE REQUIREMENTS

Limitations

Applicable Requirements from the NSR Permit: The following limitations are applicable requirements from the NSR permit issued on September 12, 2003. A copy of the permit is attached as attachment B.

Condition 25: Plantwide Emission Limits - Plant-wide emissions from the operation of the printing facility shall not exceed the limits specified below:

	<u>lbs/hr</u>	<u>tons/yr</u>
Total Suspended Particulates (including PM ₁₀)	2.1	3.6
PM ₁₀	1.2	3.3
Sulfur Dioxide	64.7	24.3
Nitrogen Oxides (as NO ₂)	18.2	27.3
Carbon Monoxide	8.1	18.9
Volatile Organic Compounds	532.4	1466.7
Toluene	459.4	1263.3
Xylene	24.7	67.9
Hexane	4.8	13.2
Ethylbenzene	9.6	26.3

Included as Condition VII.A.4.

Condition 48: Maintenance/Operating Procedures - The permittee shall take the following measures in order to minimize the duration and frequency of excess emissions, with respect to air pollution control equipment, monitoring devices, and process equipment which affect such emissions:

- Develop a maintenance schedule and maintain records of all scheduled and non-scheduled maintenance.
- Maintain an inventory of spare parts.
- Have available written operating procedures for equipment. These procedures

shall be based on the manufacturer's recommendations, at a minimum.

- d. Train operators in the proper operation of all such equipment and familiarize the operators with the written operating procedures. The permittee shall maintain records of the training provided including the names of trainees, the date of training and the nature of the training.

Included as Condition VII.A.6.

Condition 45: Notification for Control Equipment Maintenance - The permittee shall furnish notification to the Director, Piedmont Region of the intention to shut down or bypass, or both, air pollution control equipment for necessary scheduled maintenance, which results in excess emissions for more than one hour, at least 24 hours prior to the shutdown. The notification shall include, but is not limited to, the following information:

- a. Identification of the air pollution control equipment to be taken out of service, as well as its location, and registration number;
- b. The expected length of time that the air pollution control equipment will be out of service;
- c. The nature and quantity of emissions of air pollutants likely to occur during the shutdown period;
- d. Measures that will be taken to minimize the length of the shutdown or to negate the effect of the outage

Included as Condition VIII.E.2.

Condition 51: Registration/Update - Annual requirements to fulfill legal obligations to maintain current stationary source emissions data will necessitate a prompt response by the permittee to requests by the DEQ or the Board for information to include, as appropriate: process and production data; changes in control equipment; and operating schedules. Such requests for information from the DEQ will either be in writing or by personal contact. The availability of information submitted to the DEQ or the Board will be governed by applicable provisions of the Freedom of Information Act, §§ 2.1-340 through 2.1-348 of the Code of Virginia, § 10.1-1314 (addressing information provided to the Board) of the Code of Virginia, and 9 VAC 5-170-60 of the State Air Pollution Control Board Regulations. Information provided to federal officials is subject to appropriate federal law and regulations governing confidentiality of such information.

Included as Condition VIII.E.3.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific emission requirements that have been determined to be applicable.

9 VAC 5-20-180 I requires s source to reduce the level of operation or shut down in order to prevent violating an ambient air quality standard.
Included as Condition VII.A.8.

9 VAC 5-50-20 E requires the owner to take action to minimize emissions at all times, including startup, shutdown and malfunction.
Included in Condition VII.A.5.

9 VAC 5-50-20 F requires disposal of VOC from any facility subject to the provisions of 9 VAC 5, Chapter 50 to be accomplished consistent with good air pollution control practices. (There are no “existing facilities” subject to 9 VAC 5, Chapter 40 at this facility.)
Included as Condition VII.A.3.

9 VAC 5-50-80 The new and modified source visible emission standard applies to anything not listed previously.
Included as condition VII.A.2.

9 VAC 5-20-70, 40 CFR §60.12, and 40 CFR §63.5(b) prohibits circumvention of any standard by dilution, by piecemeal carrying out of an operation to avoid a standard, or by a pattern of ownership to avoid coverage.
Included as Condition VII.A.7.

40 CFR §63.4(a)(5) requires the owner of an affected source subject to an emission standard under 40 CFR comply with that standard by the compliance date regardless of whether this permit has been revised or modified to incorporate the standard.
Included as Condition VII.A.1.

Monitoring

Applicable Requirements from the NSR Permit: The following monitoring requirements are applicable requirements from the NSR permit issued on September 12, 2003. A copy of the permit is attached as attachment B.

Condition 38: Continuous Monitoring Systems and Measuring Devices - All continuous monitoring systems and measuring devices shall be installed and operational prior to conducting initial performance tests. Performance evaluations of the continuous monitoring system must take place during the performance tests under 9 VAC 5-50-30 of the Regulations or within 30 days thereafter. Two copies of the performance evaluation report shall be submitted to the Director, Piedmont Regional Office within 45 days of said evaluation. Verification of operational status shall, as a minimum, include completion of the manufacturer's written requirements or recommendations for installation, operation and calibration of the device.
Included as Condition VII.B.1.

Short term emission limits. Because hourly emission limits are based upon the capacities of the equipment to emit on a short term bases no monitoring was required to demonstrate periodic compliance with hourly emission limits in the NSR permit.

Long term throughput and emission limits. Records required by 9 VAC 5-50-50 E provides assurance of periodic compliance with annual throughput and emission limits. No further monitoring was required.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific monitoring requirements that have been determined to be applicable.

9 VAC 5-50-40 D requires that the owner/operator install, calibrate, maintain and operate monitoring equipment properly.
Included as condition VII.B.1.

9 VAC 5-50-40 B requires that continuous monitoring equipment be installed and operational prior to any performance test.
Included as condition VII.B.2.

9 VAC 5-50-40 C requires performance evaluations of monitoring systems within 30 days of a performance test.
Included as condition VII.B.3

Additional Periodic Monitoring Requirements: No specific monitoring requirements have been added to meet Part 70 requirements.

Recordkeeping

Applicable Requirements from the NSR Permit: The following recordkeeping requirements are applicable requirements from the NSR permit issued on September 12, 2003. A copy of the permit is attached as attachment B.

Condition 41: Required Compliance Records: The permittee shall maintain records of all emission data and operating parameters necessary to demonstrate compliance with this permit. The content and format of such records shall be arranged with the Director, Piedmont Region. These records shall include, but are not limited to:

- a. Maintenance schedules and records of completed maintenance,
- b. Operator training records.

Included as condition VII.C.1.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have specific recordkeeping requirements that have been determined to be applicable.

9 VAC 5-50-50 D, E, and F requires monitoring system measurements, evaluations, calibrations and other information be retained for two years, the owner/operator to keep records of any information which he wishes to be used to determine compliance, and the owner/operator to keep records sufficient to determine emissions.
Included as part of Condition VII.C.2.

Additional Periodic Monitoring Requirements: No additional recordkeeping requirements were added for periodic monitoring to meet Part 70 requirements:

Testing

The permit does not require any additional performance testing to satisfy regulatory requirements. The Department and EPA have authority under 9 VAC 5-50-30 G to require testing not included in this permit if necessary to determine compliance with an emission limit or standard. A table of test methods has been included in the permit in the event that testing is performed.

Applicable Requirements from the NSR Permit: The following testing requirement is an applicable requirement from the NSR permit issued on September 12, 2003. A copy of the permit is attached as attachment B.

Condition 33: The permitted facility shall be modified so as to allow for emissions testing and monitoring upon reasonable notice at any time, using appropriate methods. Test ports shall be provided at appropriate locations.”
Included as Condition VII.D.1

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have testing requirements that have been determined to be applicable.

9 VAC 5-50-30 A requires the source to use approved testing methods.
Included as Condition VII.D.3.

9 VAC 5-50-30 B and 9 VAC 5-60-30 B require the source to use testing guidelines approved by DEQ.
Included as Condition VII.D.4

9 VAC 5-50-30 C and 9 VAC 5-60-30 C require the source to use approved testing methods.
Included as Condition VII.D.2.

9 VAC 5-50-30 E and 9 VAC 5-60-30 E require the source to use 3 test runs and when 2 may be used.

Included as Condition VII.D.3.

9 VAC 5-50-30 F and 9 VAC 5-60-30 F require the source to provide safe sampling facilities.

Included as Condition VII.D.1.

Reporting

Applicable Requirements from the NSR Permit: There are no applicable reporting requirements contained in the NSR permit issued on September 12, 2003.

Applicable Requirements from the Virginia Regulations: The following Virginia Administrative Codes have reporting requirements that have been determined to be applicable.

9 VAC 5-50-50 A.1 - 5 requires that the source give the DEQ notice of certain milestones: planned performance tests and evaluations, commencement of construction, planned startup and actual startup.

Included as Condition VII.E.1.

Streamlined Requirements

NSR General Conditions:

Condition 44 - Right of Entry: Streamlined and included in the Title V General Conditions as Condition Q.

Condition 46 - Notification for Facility or Control Equipment Malfunction: Streamlined and included in the Title V General Conditions as Condition F.

Condition 49 - Permit Suspension/Revocation: Streamlined and included in the Title V General Conditions as Condition V.

Condition 50 - Change of Ownership: Streamlined and included in the Title V General Conditions as Condition T.

Condition 52 - Permit Copy: Streamlined and included in the Title V General Conditions as Condition S.

Limitations. Circumvention: The three references are all worded identically and all apply to this source.

Monitoring. CMS Requirements: The applicable general requirements of 9 VAC 5-50-40 D subsumes the portion of the NSR permit condition 32 that has essentially the same meaning.

Monitoring. Verification of CMS and CMD Operational Status: The applicable general requirements of 9 VAC 5-50-40 B subsumes the portion of the NSR permit condition 32 that has essentially the same meaning.

Monitoring. CMS Performance Evaluations: The applicable general requirements of 9 VAC 5-50-40 C subsumes the portion of the NSR permit condition 32 that has essentially the same meaning.

Testing. Conduct of Test Runs: 9 VAC 5-50-30 E and 9 VAC 5-60-30 E are worded identically. The two are combined.

Testing. Performance Testing Facilities: 9 VAC 5-50-30 F and 9 VAC 5-60-30 F are worded identically. The two are combined.

Testing. Test Guidelines: 9 VAC 5-50-30 B and 9 VAC 5-60-30 B are worded identically. The two are combined.

Testing. Conduct of Performance Tests: 9 VAC 5-50-30 C and 9 VAC 5-60-30 C are worded identically. The two are combined.

NSR Permit Requirements Removed. The following conditions from the NSR permit issued on September 12, 2003 were streamlined out of this permit for the reasons stated below:

Condition 1: Incorporates the NSR permit application into the permit. Not an applicable requirement.

Condition 2: Equipment list from the NSR Permit application. Subsumed by the more complete lists of Significant Emission Units and Insignificant Emission Units in this permit.

Condition 43: Permit Invalidation applies to construction and modification of emission units in the new source review program.

INSIGNIFICANT EMISSION UNITS

The insignificant emission units are presumed to be in compliance with all requirements of the Clean Air Act as may apply. Based on this presumption, no monitoring, recordkeeping or reporting shall be required for these emission units in accordance with 9 VAC 5-80-110.

Insignificant emission units include the following:

Emission Unit No.	Emission Unit Description	Citation	Pollutant(s) Emitted (5-80-720 B)	Rated Capacity (5-80-720 C)
T022	Petroleum Storage Tank (No. 2 Fuel Oil)	5-80-720 B. 2. & 5.	VOC	6000 gallons
CM001	Chemical Dechrome Tank	5-80-720 B. 5.	None	NA
CM002	Mechanical Dechrome Tank	5-80-720 B. 5.	None	NA
CM003	Degreasing Tank (non-VOC process)	5-80-720 B. 5.	None	NA
CM004	Copper Plating Tank	5-80-720 B. 5.	None	NA
CM005	Polishing Tank	5-80-720 B. 5.	None	NA
CM006	Electro-mechanical Engraving Tank	5-80-720 B. 5.	None	NA

¹The citation criteria for insignificant activities are as follows:

9 VAC 5-80-720 A - Listed Insignificant Activity, Not Included in Permit Application

9 VAC 5-80-720 B - Insignificant due to emission levels

9 VAC 5-80-720 C - Insignificant due to size or production rate

GENERAL CONDITIONS

The permit contains general conditions required by 40 CFR Part 70 and 9 VAC 5-80-110 that applies to all Federal Operating permit sources. These include requirements for submitting semi-annual monitoring reports and an annual compliance certification report. The permit also requires notification of deviations from permit requirements or any excess emissions.

Comments on General Conditions

B. Permit Expiration

This condition refers to the Board taking action on a permit application. The Board is the State Air Pollution Control Board. The authority to take action on permit application(s) has been delegated to the Regions as allowed by §§2.1-20.01:2 and §§10.1-1185 of the *Code of Virginia*, and the “Department of Environmental Quality Agency Policy Statement NO. 3-2001”.

This general condition cites the entire Article that follows:
Article 1 (9 VAC 5-80-50 et seq.), Part II of 9 VAC 5 Chapter 80. Federal Operating Permits for Stationary Sources

This general condition cites the sections that follow:

- 9 VAC 5-80-80. Application
- 9 VAC 5-80-140. Permit Shield
- 9 VAC 5-80-150. Action on Permit Applications

F. Failure/Malfunction Reporting

Section 9 VAC 5-20-180 requires malfunction and excess emissions reporting within four (4) hours of discovery. Section 9 VAC 5-80-250 of the Title V regulations also requires malfunction reporting; however, reporting is required within two (2) days. Section 9 VAC 5-20-180 is from the general regulations. All affected facilities are subject to 9 VAC 5-20-180 including Title V facilities. Title V facilities are subject to both sections. A facility may make a single report that meets the requirements of 9 VAC 5-20-180 and 9 VAC 5-80-250. The report must be made within four (4) day time business hours after discovery of the malfunction.

In order for emission units to be relieved from the requirement to make a written report in 14 days the emission units must have continuous monitors and the continuous monitors must meet the requirements of 9 VAC 5-50-410 or 9 VAC 5-40-41.

This general condition cites the sections that follow:

- 9 VAC 5-40-41. Emissions Monitoring Procedures for Existing Sources
- 9 VAC 5-40-50. Notification, Records and Reporting
- 9 VAC 5-50-50. Notification, Records and Reporting

This general condition contains a citation from the Code of Federal Regulations as follows:
40 CFR 60.13 (h). Monitoring Requirements.

J. Permit Modification

This general condition cites the sections that follow:

9 VAC 5-80-50. Applicability, Federal Operating Permit For Stationary Sources
9 VAC 5-80-190. Changes to Permits.
9 VAC 5-80-260. Enforcement.
9 VAC 5-80-1100. Applicability, Permits For New and Modified Stationary Sources
9 VAC 5-80-1790. Applicability, Permits For Major Stationary Sources and Modifications
Locating in Prevention of Significant Deterioration Areas
9 VAC 5-80-2000. Applicability, Permits for Major Stationary Sources and Major Modifications
Locating in Nonattainment Areas

U. Malfunction as an Affirmative Defense

The regulations contain two reporting requirements for malfunctions that coincide. The reporting requirements are listed in sections 9 VAC 5-80-250 and 9 VAC 5-20-180. The malfunction requirements are listed in General Condition U and General Condition F. For further explanation see the comments on General Condition F.

This general condition cites the sections that follow:

9 VAC 5-20-180. Facility and Control Equipment Maintenance or Malfunction
9 VAC 5-80-110. Permit Content

Y. Asbestos Requirements

The Virginia Department of Labor and Industry under Section 40.1-51.20 of the Code of Virginia also holds authority to enforce 40 CFR 61 Subpart M, National Emission Standards for Asbestos.

This general condition contains a citation from the Code of Federal Regulations that follow:
40 CFR 61.145, 61.148, and 61.150 - NESHAP Subpart M. National Emissions Standards for Asbestos as it applies to demolition and renovation, insulating materials, and waste disposal, respectively.

This general condition cites the regulatory sections that follow:

9 VAC 5-60-70. Designated Emissions Standards
9 VAC 5-80-110. Permit Content

STATE ONLY APPLICABLE REQUIREMENTS

The following Virginia Administrative Codes have specific requirements only enforceable by the State and have been identified as applicable by the applicant:

none

FUTURE APPLICABLE REQUIREMENTS

There are no known future applicable requirements the facility will be subject to at this time.

INAPPLICABLE REQUIREMENTS

Inapplicable requirements have been identified in the individual emission source sections of the statement of basis.

COMPLIANCE PLAN

There is no compliance plan applicable to the facility at this time.

CONFIDENTIAL INFORMATION

The permittee did not submit a request for confidentiality. All portions of the Title V application are suitable for public review.

PUBLIC PARTICIPATION

The proposed permit will be placed on public notice in the Richmond Times-Dispatch from September 14, 2003 to October 13, 2003. The proposed permit was sent to EPA for review and comment. The 45-day EPA review ended on December 27, 2003. No comments were received.